

Transportation Asset Management:

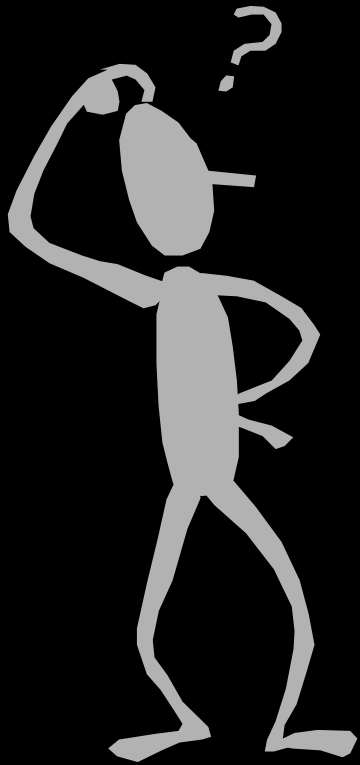
What is it, why do we need it, what are the benefits?

by
Bob Slattery Jr.
Mayor, City of Mt. Morris

Prepared for the
Michigan
Transportation Asset Management
Conference
May 10, 2006

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Transportation Asset Management:



1. What is it?

2. Why do we need it?

3. What are the benefits?

What is it?

Asset Management:

- “An ongoing process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment.”

Act 499 of 2002

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What is it?

Asset Management:

- A ***strategic*** approach to road maintenance, not tactical approach
 - *"Big picture"* – holistic view.
 - Long range - life of the asset.
 - Decisions based on strategic goals.
 - Emphasizes **CPM**.
 - Stresses *"a mix of fixes"*.

- Micro-surfacing;
- Chip sealing;
- Concrete joint resealing and crack sealing;
- Concrete joint repair and surface spall repair;
- Patching concrete;
- Shoulder resurfacing;
- Concrete diamond grind;
- Dowel bar retrofit;
- Bituminous overlays;
- Restoration of drainage;
- Overband crack filling;

CPM

What is it?

CPM

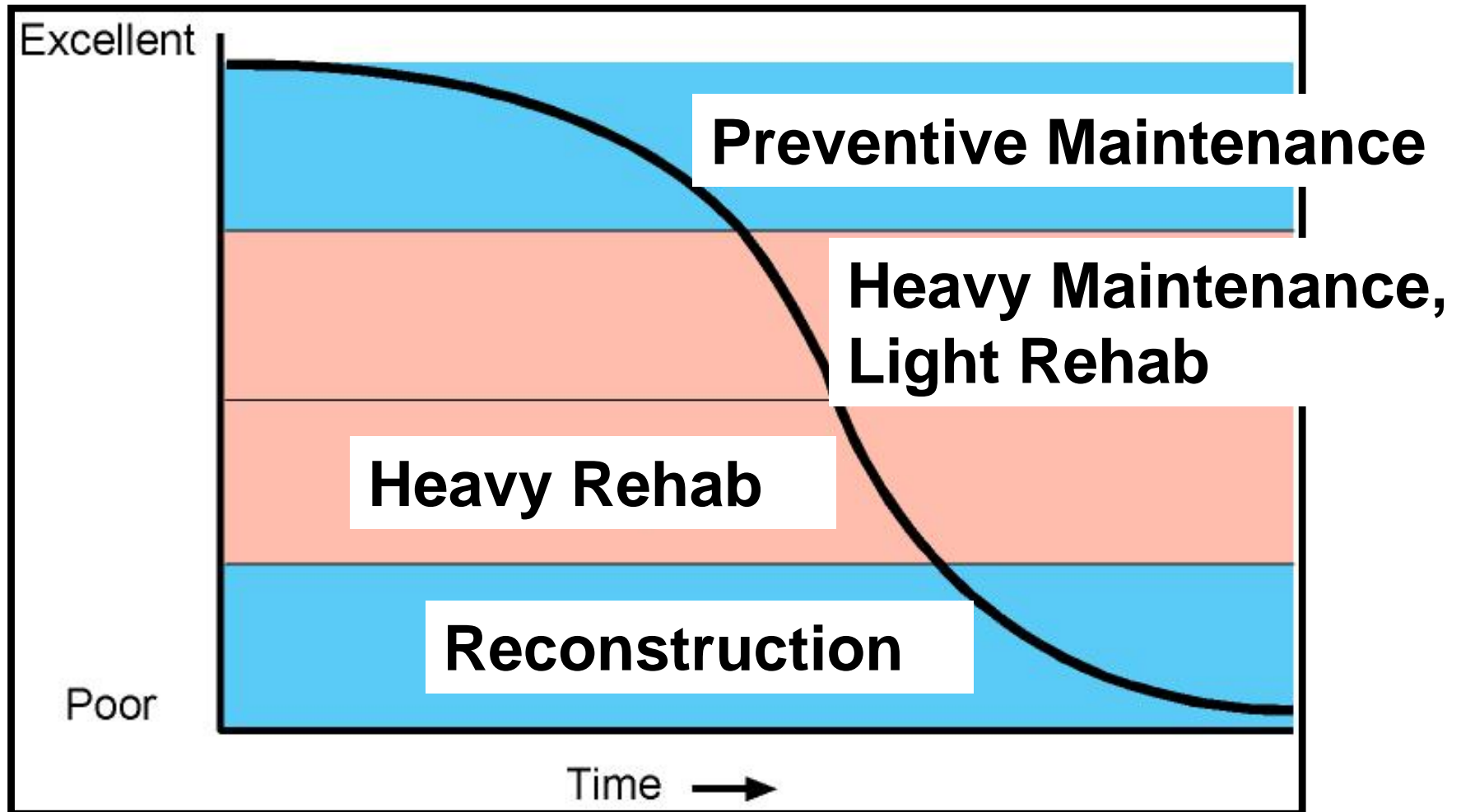
- Surface milling and nonstructural overlays;
- Ultra-thin overlay;
- Full depth concrete;
- Partial depth concrete pavement repairs;
- Cape seal, slurry seal, fog seal;
- Cold milling;
- Hot-in-place bituminous recycling;
- Skip patching;
- Profile milling;
- Concrete pavement restoration;
- Under-drain outlet repair and cleaning;

What is it?

Mix of Fixes:

Applying the *right* fix,
at the *right* time,
in the *right* place.

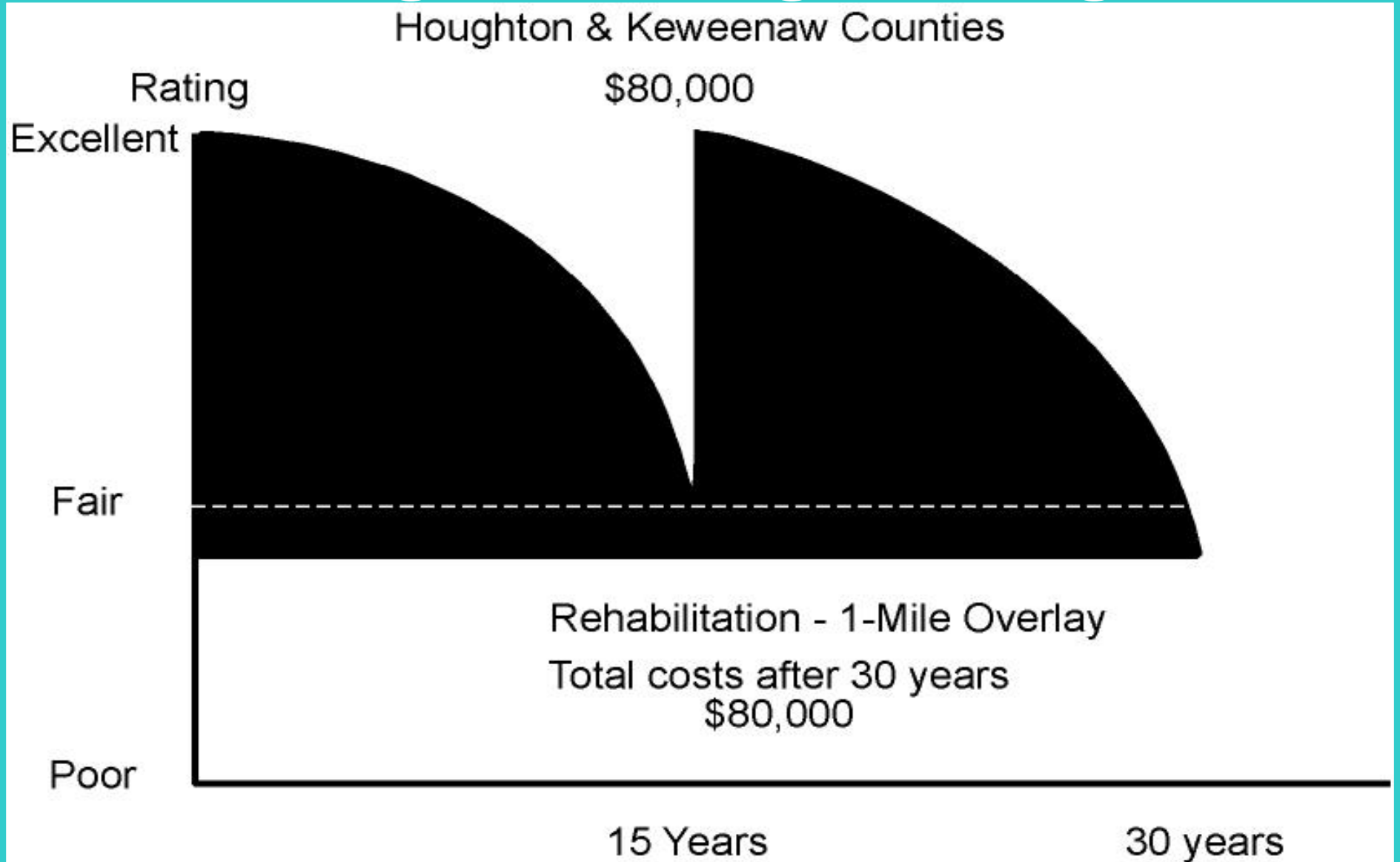
Windows of Opportunity:



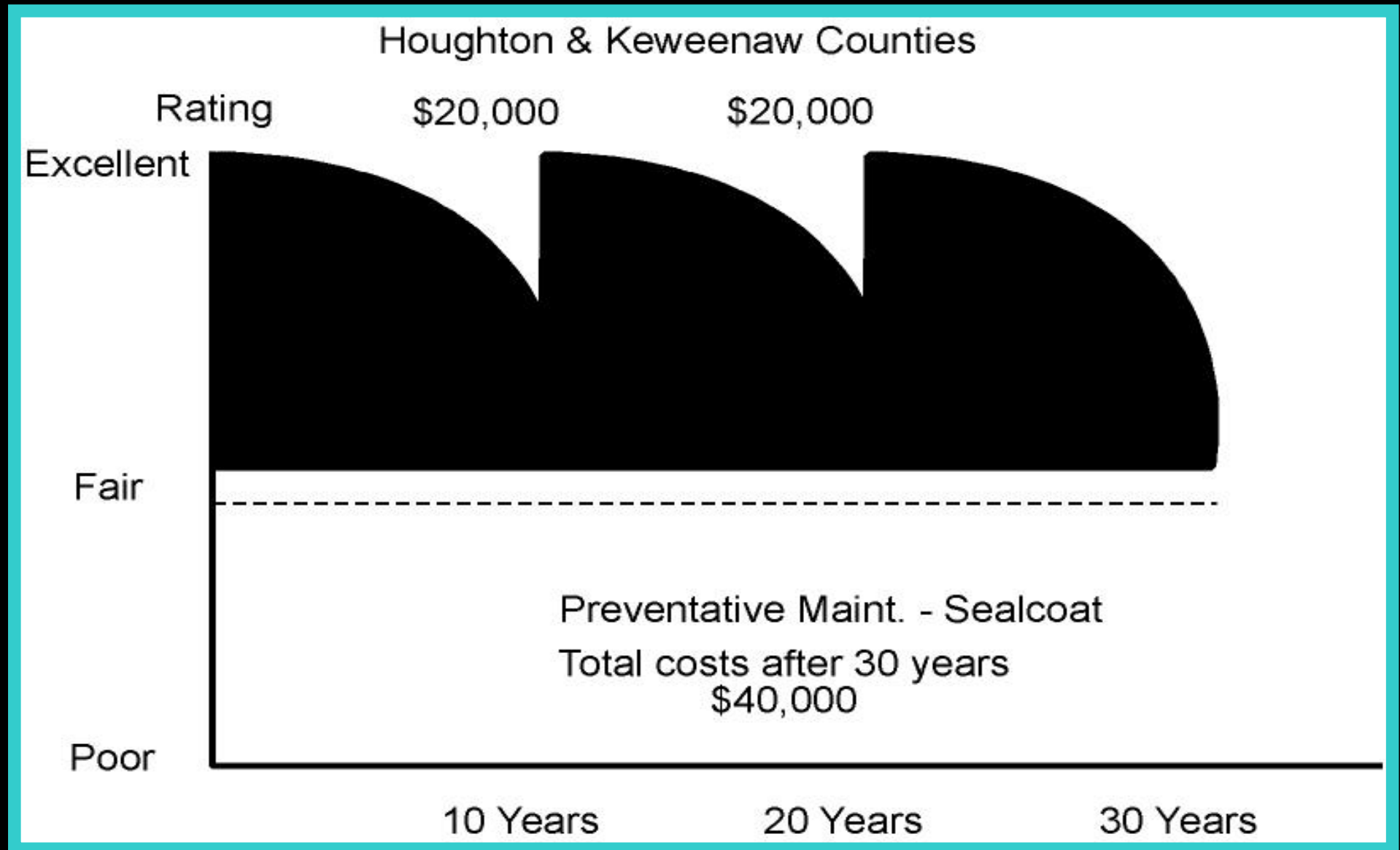
Example

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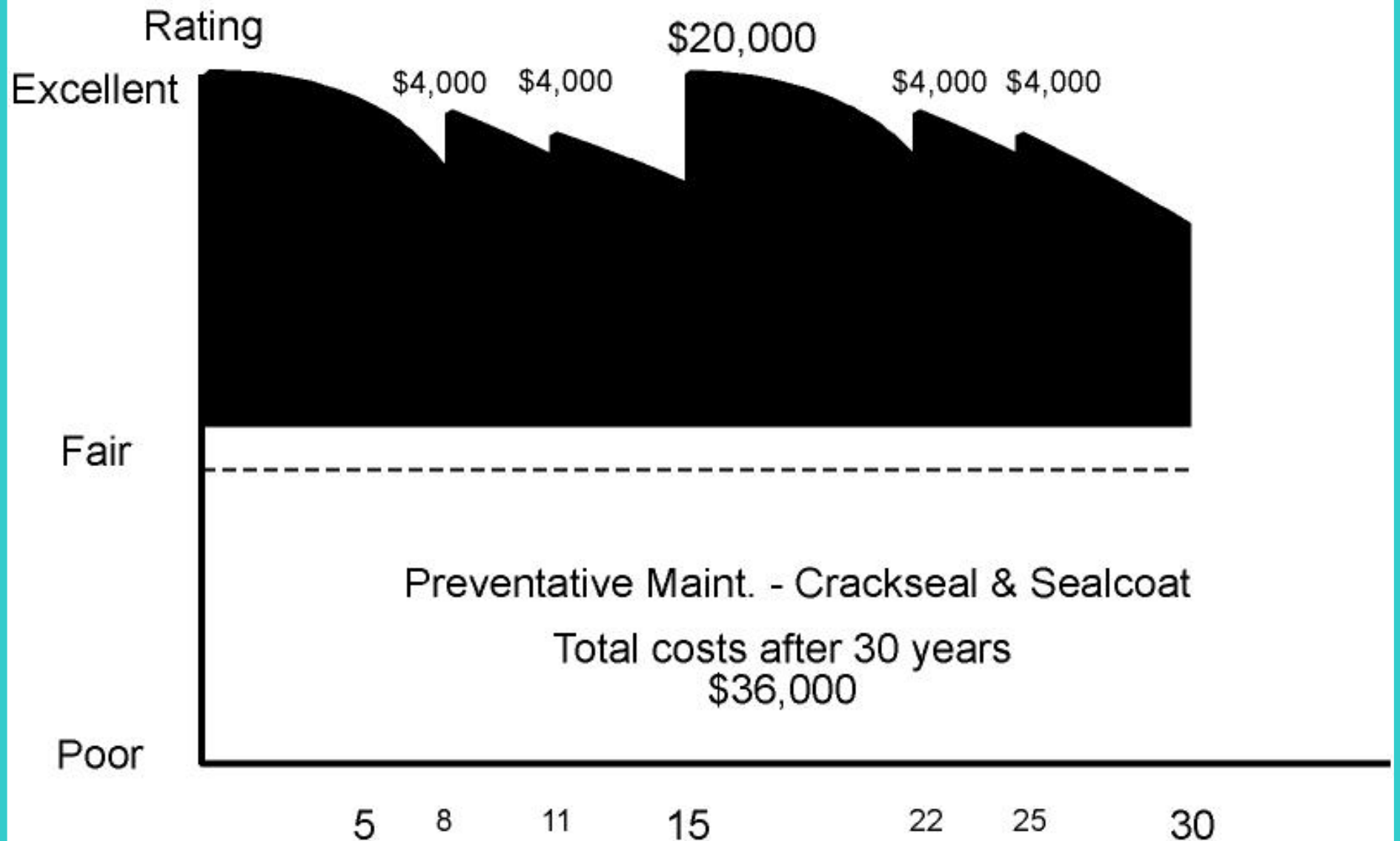
Overlay every 15 years



Sealcoat every 10 years



Mix of Fixes Approach



PASER Evaluation & Rating



asset M
2006

Pavement Surface Evaluation and Rating

PASER Concrete Roads Manual

RATING
10



RATING
7



RATING
4



RATING
1



 Transportation
Information Center
University of Wisconsin-Madison

Pavement Surface Evaluation and Rating

PASER Asphalt Roads Manual

RATING
10



RATING
7



RATING
4



RATING
1



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PASER Rating System

RATINGS ARE RELATED TO NEEDED MAINTENANCE OR REPAIR

Rating 9 & 10 No maintenance required

Rating 8 Little or no maintenance

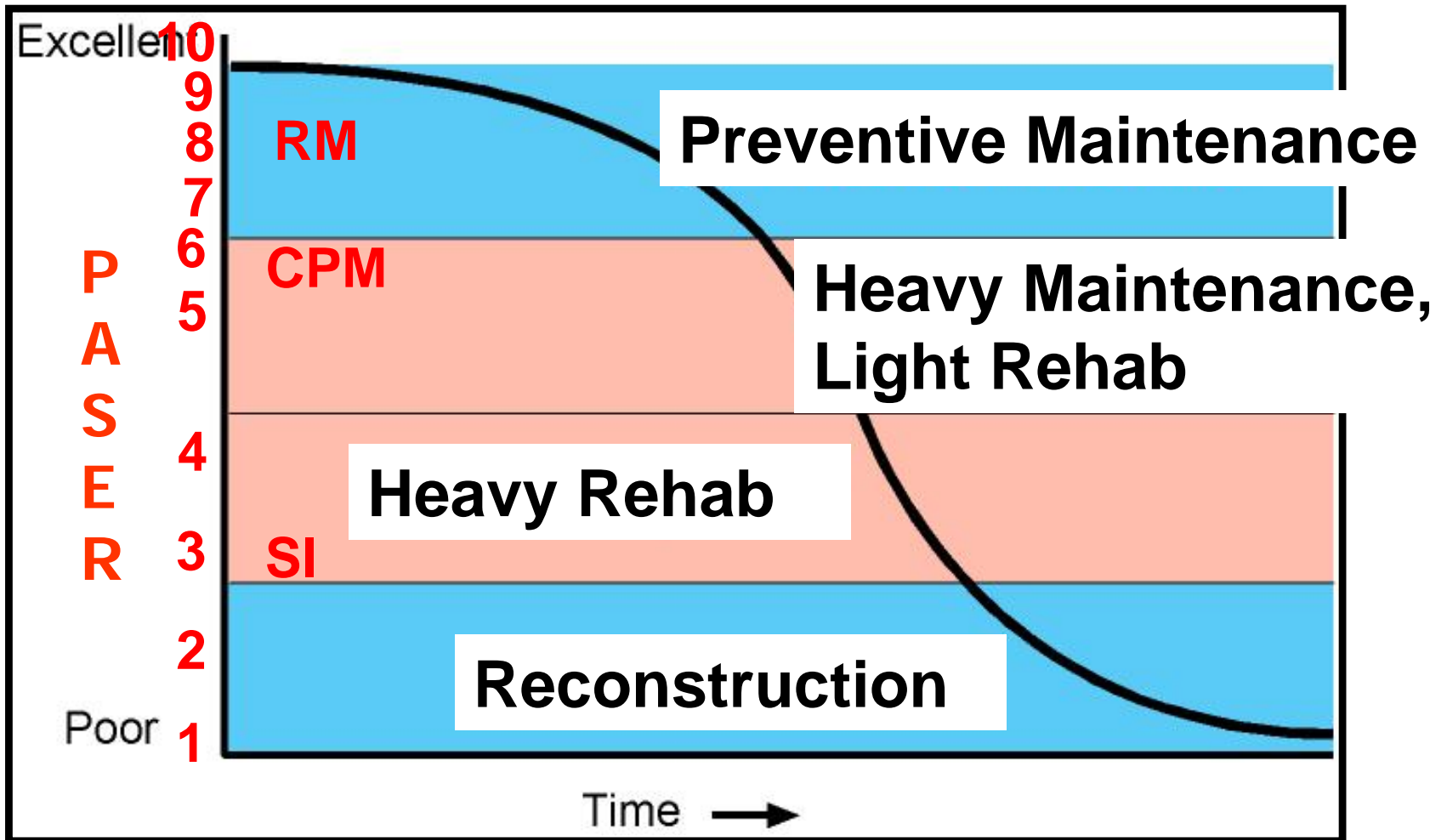
Rating 7 Routine maintenance, cracksealing and minor patching

Rating 5 & 6 Preservative treatments (sealcoating)

Rating 3 & 4 Structural improvement and leveling (overlay or recycling)

Rating 1 & 2 Reconstruction

Windows of Opportunity:

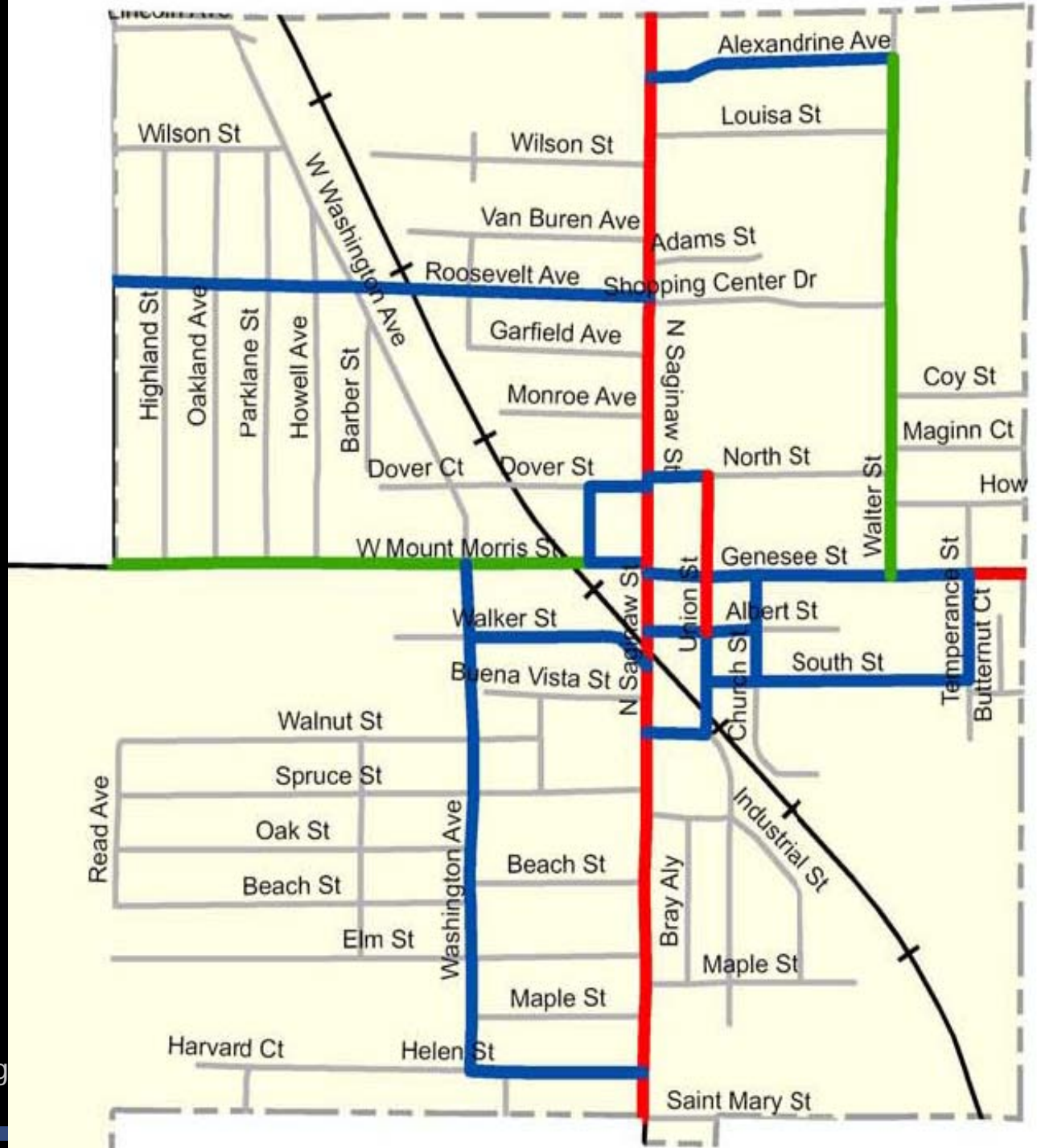


City of Mt. Morris 2005 PASER

RM (8-10) ———

CPM (5-7) ———

SI (1-4) ———



Michig

What is it?

- Asset Management - Summary
 - Strategic, holistic approach
 - Emphasizes preventive maintenance.
 - Rehabilitation when really needed.
 - Reconstruction is no longer the priority.
 - Stresses a “mix of fixes”.

What is it?

- The Asset Management Process:
 - Periodic System Inventories
 - Establish strategic goals, objectives and performance measures.
 - Forecast system condition.
 - Evaluate investment scenarios
 - Develop and implement a multi-year investment program.



Why do we need it?

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need (cont.)

- Roads are bad and getting worse
 - 38% in “poor” or “mediocre” condition
 - Only 47% are “good” (TRIP, 2006; 2004 data)
- Funding is inadequate to continue same old approach

need (cont.)

- Past practices have not worked.
- Experience has shown that a *strategic approach* of timely repairs does work.

need (cont.)

- Historically, 3 approaches to road maintenance management:
 - Political priorities
 - Professional judgment
 - Worst first

need (cont.)

- Political priorities doesn't work!
 - Project selection not related to need
 - Creates winners and losers
 - Creates adversarial relationships
 - And public confidence takes a beating



need (cont.)

**Meanwhile, the
system continues to
deteriorate...**

7/16/2003 10:06am

need (cont.)

- Professional judgment does not work!
 - Essential, but not sufficient alone
 - Subjective decision-making
 - Project selection is tactical, not strategic
 - Public confidence not enhanced



need (cont.)

**Meanwhile, the
system continues
to deteriorate...**

7/17/2003 4:42pm

need (cont.)

- Worst first just doesn't work!
 - 50 years of falling further behind proves that.
 - Cost of reconstruction - expensive.

need (cont.)

**Meanwhile, the
system
continues
to
deteriorate.**

7/16/2003 8:30am

need (cont.)

- The old maintenance model?
 - Roads selected without comparison to network.
 - Reconstruct and overlay the "maintenance solution".
 - "We can't work on that road now, we just fixed it".
 - "Fred retired. Now what?"
 - Spend more and more – slip further behind.

need (cont.)

**Meanwhile,
the system**

**can't deteriorate
much further...**



What are the benefits?

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benefits

- Save money
- Emphasize Capital Preventive Maintenance (CPM)
- Postpone reconstruction,
- **save dollar\$**



Q: How much?

benefits (cont.)

- Every dollar spent on Capital Preventive Maintenance,

can **save \$4 - \$6**
in structural improvements later.

FHWA

A: A lot!

benefits (cont.)

- Improved effectiveness
- A.M. the most cost effective maintenance option:
 - Low cost CPM
 - Seals road surface and slows deterioration
 - Avoids “band-aids” on roads that need surgery

- “What-if” and trade-offs
- A.M. enables managers to:
 - Evaluate various scenarios
 - Do “what-if” analysis
 - Make investment decision trade offs, and
 - Select best *strategy* for achieving goals.

benefits (cont.)

- Better “buy-in”
- Empirical data readily available
 - Charts, graphs and intelligent maps (GIS)
 - Demonstrate effects of investment decisions
 - Get buy in from decision makers residents, other stakeholders

benefits (cont.)

- Create partnerships
 - Data collection a team effort:
 - MDOT
 - MPOs / RPAs
 - Road commissions
 - Local governments
 - Cooperation among road agencies

benefits (cont.)

- Knowledge of system
 - Regular, system-wide review of road surface
 - Other data (traffic, crashes, history) added
 - Data organized and available
 - Data shared with agency decision makers

benefits (cont.)

- Co-mingling of road funds!

PUBLIC ACT 9 OF 2004

- Section (6): "A city or village shall not transfer more than **25%** of its annual major street funding for the local street system ***unless it has adopted and is following an asset management process*** for its major and local street systems..."

What are the benefits? *Summary*

- Saves money.
- Increased maintenance effectiveness.
- “What-if” analysis.
- Better justify budget requests.
- Partnerships.
- Knowledge of your system.
- Co-mingling of road funds

Summary

Asset Management:

1. What is it?

Strategic, holistic approach, emphasizing CPM.
The right fix, at the right time, in the right place.

2. Why do we need it?

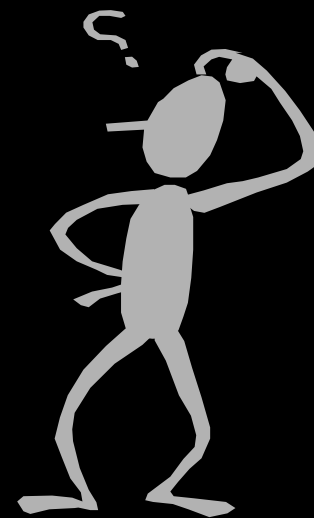
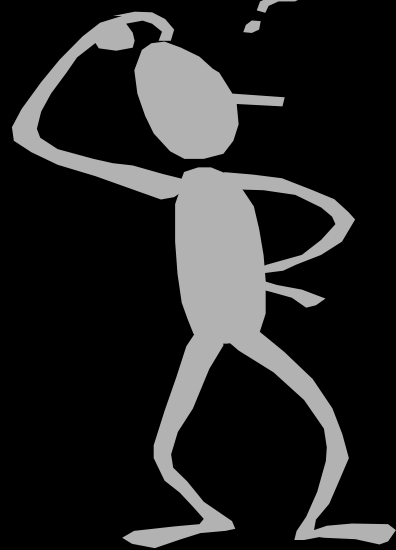
The system is deteriorating.
Tactical approaches have not worked.

3. What are the benefits?

Improved effectiveness, credibility, partnerships,
and a better road system, longer, for less money.



Questions?



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